



# Chesapeake Bay Total Maximum Daily Load

Presented to  
**Hampton Roads Planning District Commission**  
**October 21, 2009**



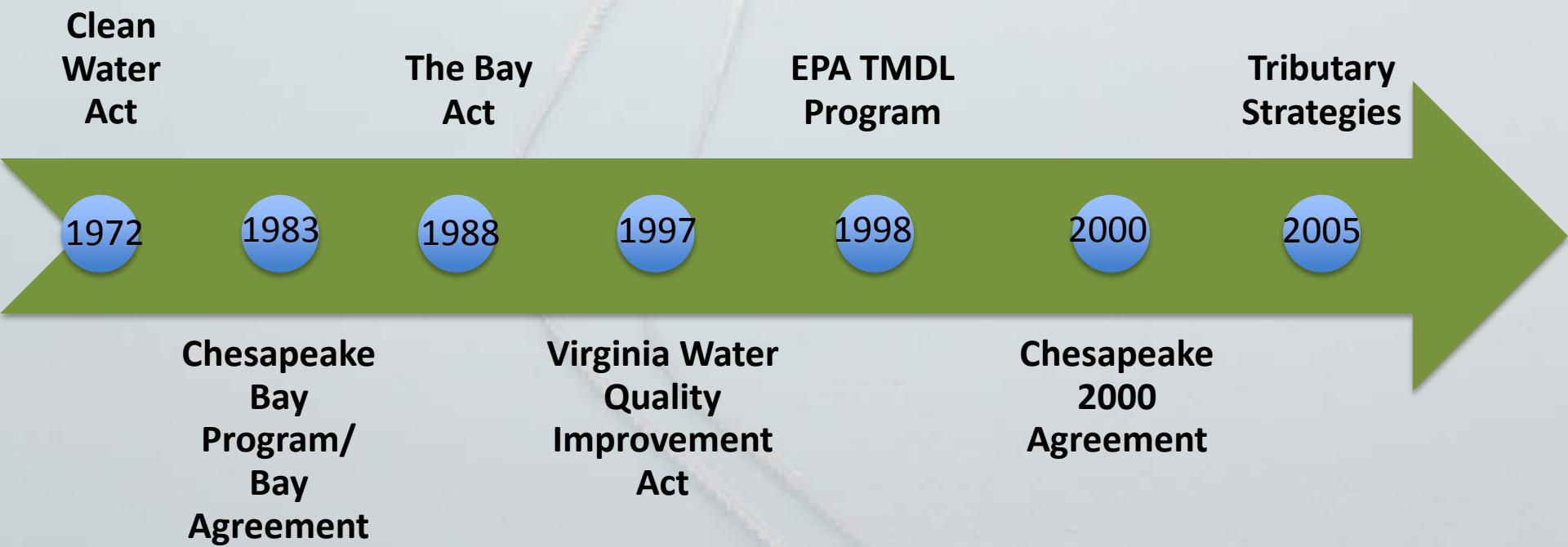
Jennifer Tribo  
Physical and Environmental Planner

# Chesapeake Bay Ecosystem

- Largest U.S. estuary
- Six-state, 64,000 square mile watershed
- 10,000 miles of shoreline
- Over 3,600 species of plants, fish and other animals
- Average depth: 21 feet
- \$750 million contribution annually to local economies
- Home to 17 million people
- 77,000 principally family farms
- Declared “national treasure” by President Obama



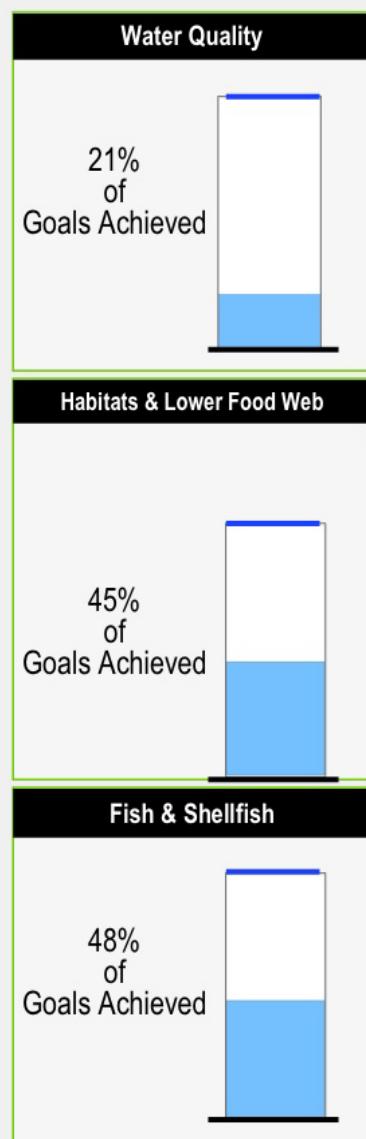
# History of the Bay TMDL



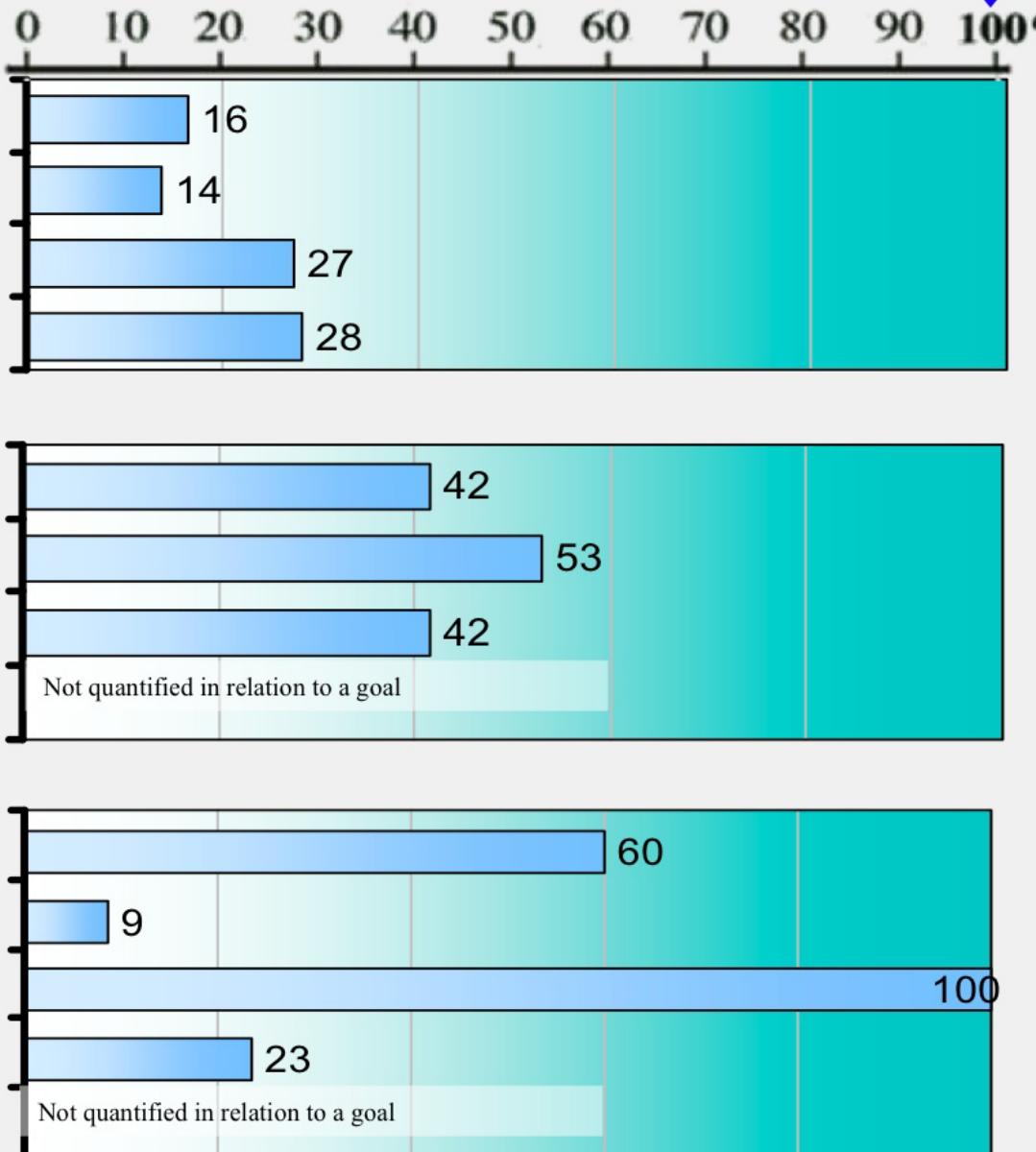
# Summary: 2008 Bay Health Assessment

Restored Bay

## Priority Areas



## Percent of Goal Achieved



Restored Bay

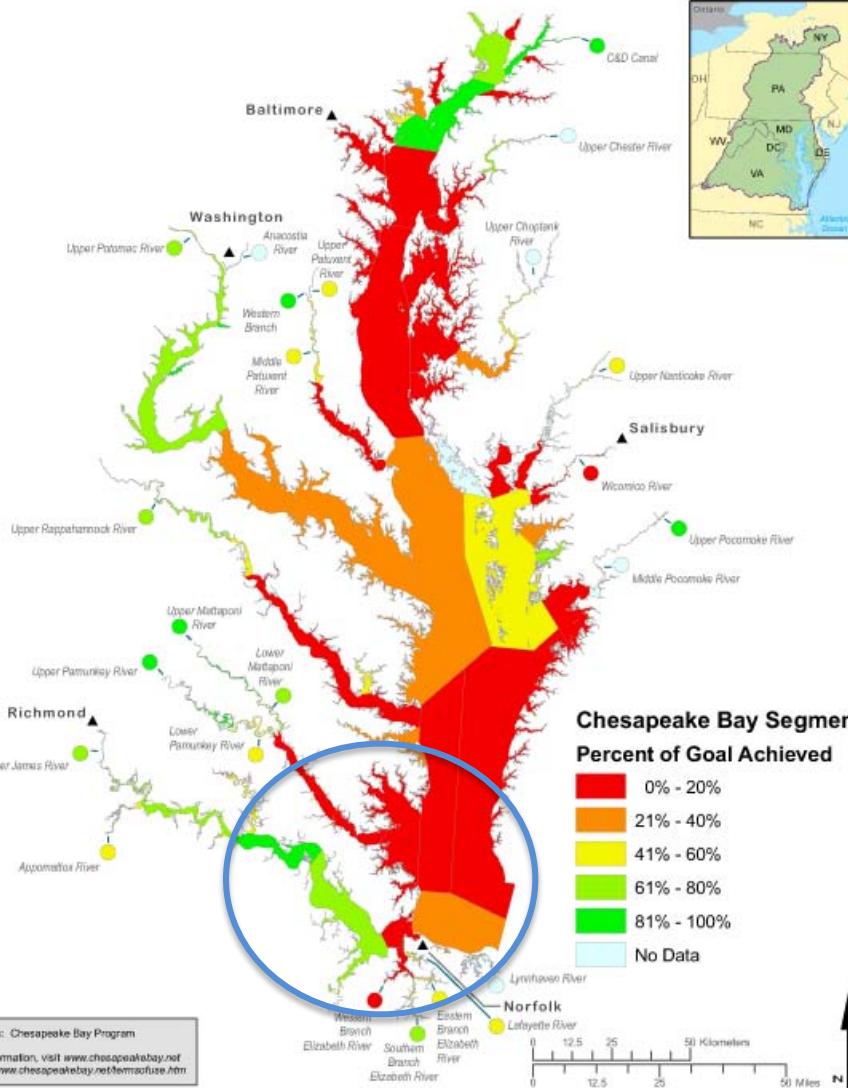
# Summary of Bay Health 2008

## Chlorophyll a (2008)

Percent of Goal Achieved



Chesapeake Bay Program  
A Watershed Partnership

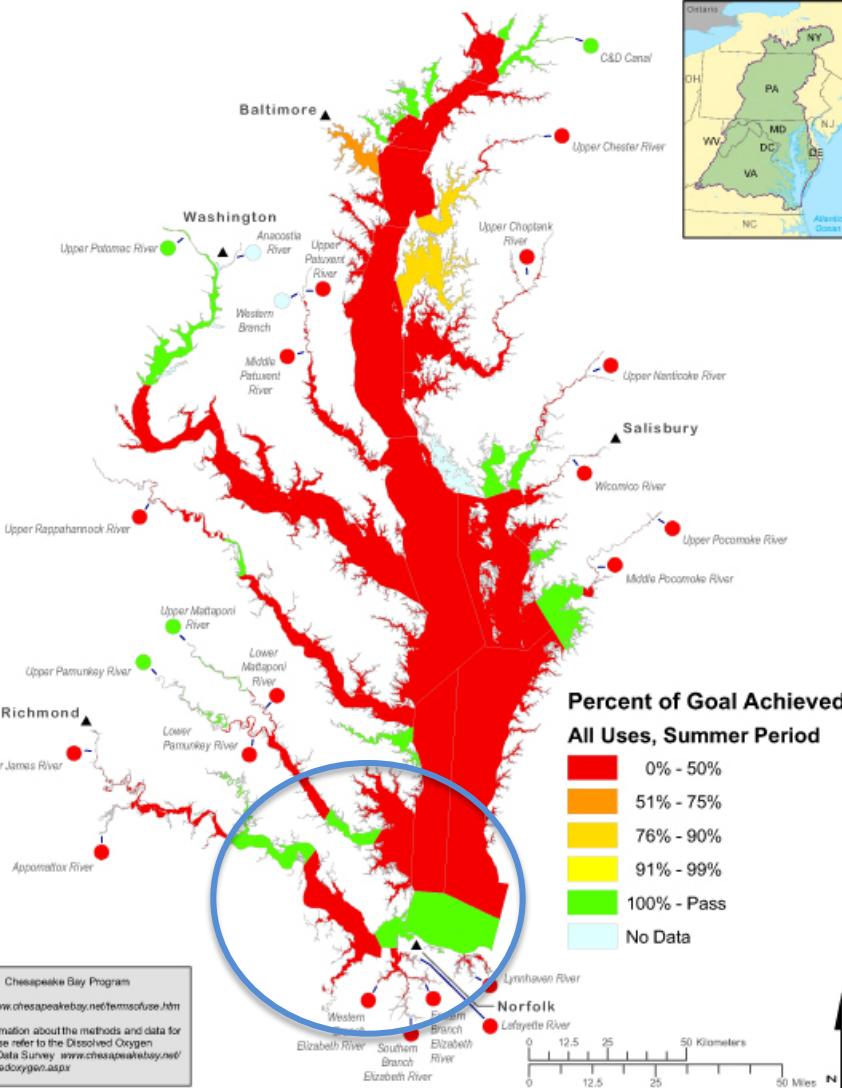


## Dissolved Oxygen (June - September, 2006 - 2008)

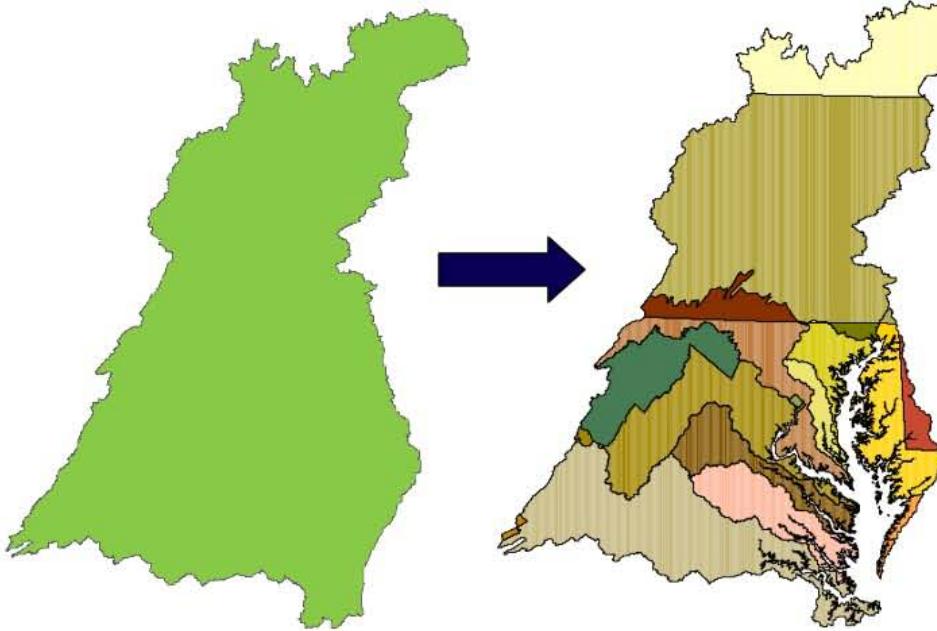
Percent of Goal Achieved (3 Year Analysis)



Chesapeake Bay Program  
A Watershed Partnership



# Taking Responsibility for Load Reductions

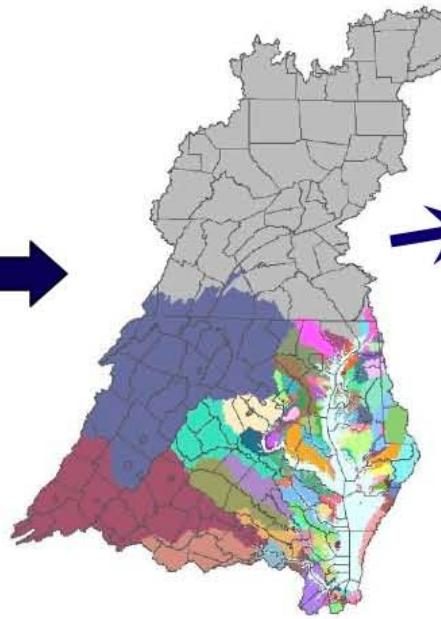


**Identify basinwide target loads**

EPA, States, DC

**Identify major basin by jurisdiction target loads**

EPA, States, DC

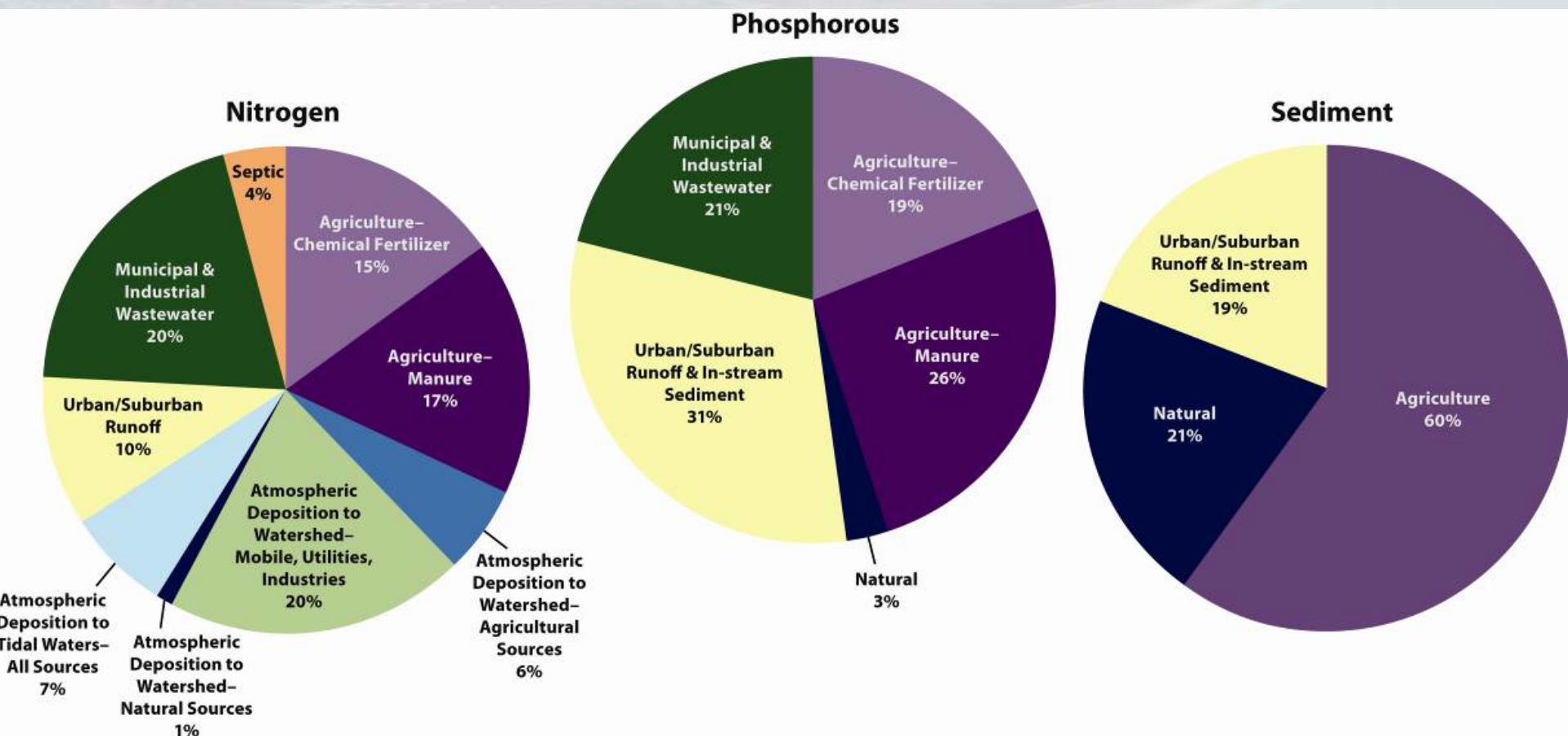


**Identify tidal segment watershed, county and source sector target loads**

States, DC, local governments & local partners

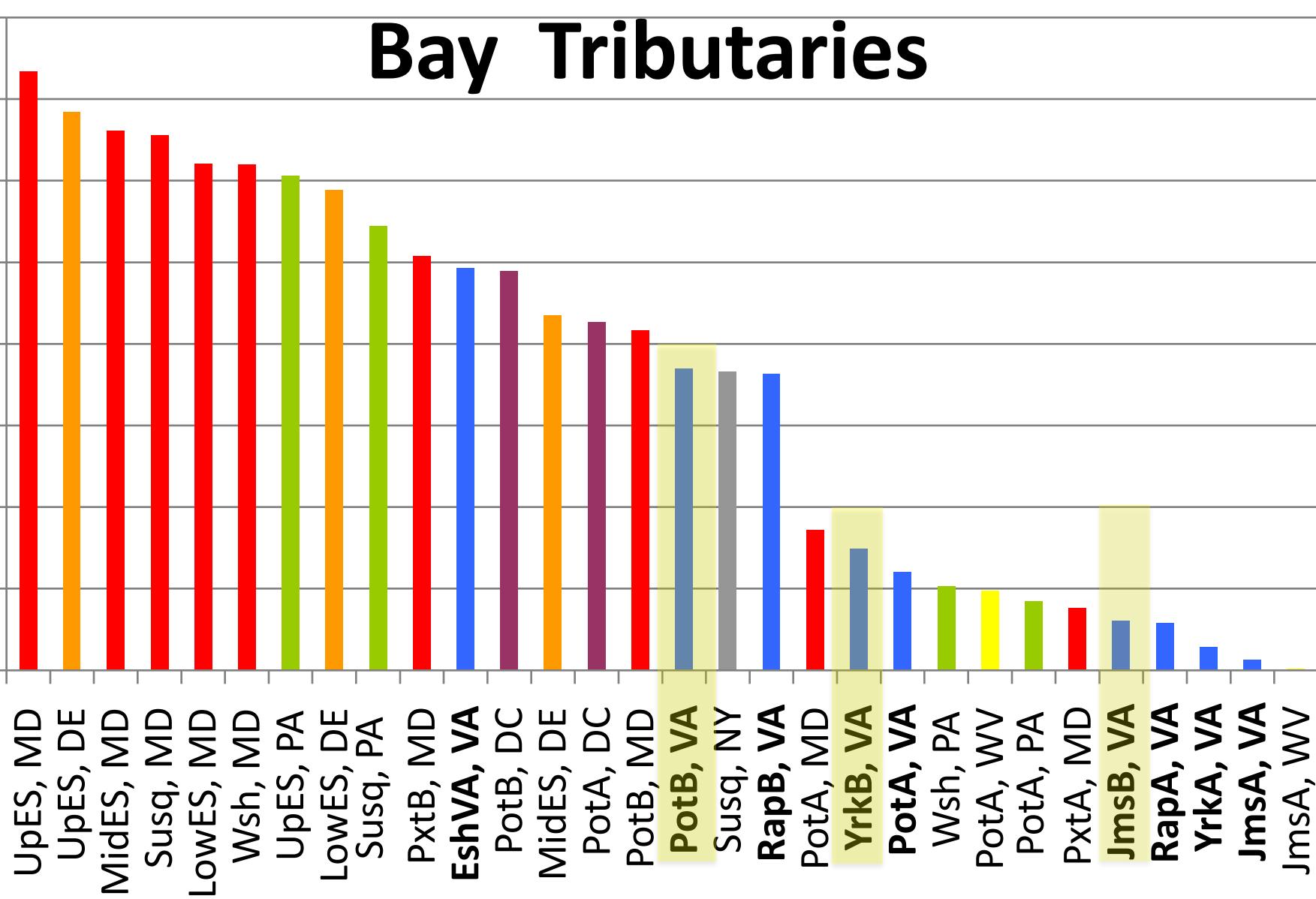


# Bay Pollution Sources



**Note:** Does not include loads from tidal shoreline erosion or the ocean. Urban/suburban runoff loads due to atmospheric deposition are included under atmospheric deposition loads. Wastewater loads based on measured discharges; other loads are based on an average hydrology year using the Chesapeake Bay Program Airshed Model and Watershed Model Phase 4.3 (CBPO, 2009).

# Relative Water Quality Impact of Bay Tributaries





Start Here

**Develop Watershed Implementation Plans** to identify nutrient and sediment reduction targets by drainage area of impaired tidal segments, county and sector to meet TMDL



**Employ EPA Consequences**  
if insufficient commitments in Watershed Implementation Plans or 2-year milestones, or enhancements and reductions behind schedule



**Model and Monitor Effectiveness** to assess actions, load reduction progress and water quality response



**Establish Chesapeake Bay TMDL**

- Set total maximum nutrient and sediment loads
- Wasteload and load allocations by state/DC, drainage area of impaired tidal segments, and sector



**Biennial Milestones** with specific controls and program enhancements to maintain schedule. Contingencies by state/DC for not achieving milestones



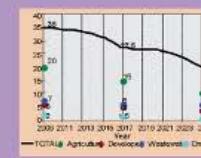
**Evaluate Program Capacity\*** (programmatic, financial, technical) necessary to fully achieve reductions



**Identify Gaps\*** between needed reductions and existing program capacity



**Identify Schedule\*** for reducing loads based on description of planned enhancements



\*Included in Watershed Implementation plans

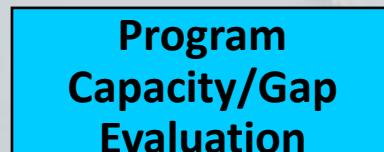
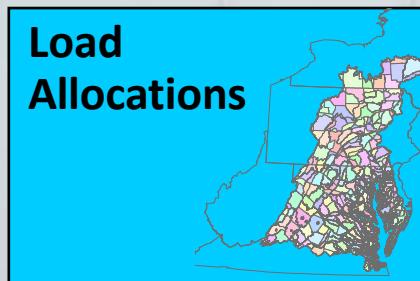
October  
2009



November-  
December  
2009



Watershed  
Implementation  
Plans: November  
2009 – March 2010



Chesapeake Bay Watershed Nitrogen Load Allocations									
Bay Segment	State	Nutrient	Agriculture Allocated (basyr)	Forest Allocated (basyr)	Other NPS Allocated Load (basyr)	Atmospheric Allocated Load (basyr)	Urban/Road Allocated Load (basyr)	Urban/Road Gross Load (basyr)	WV Gross Load (basyr)
POTMII	MD	Nitrogen	1000	500	200	300	200	200	
POTMII	VA	Nitrogen	500	250	100	150	100	200	
POTMII	PA	Nitrogen							50
POTMII	WV	Nitrogen							20

June-  
September  
2010



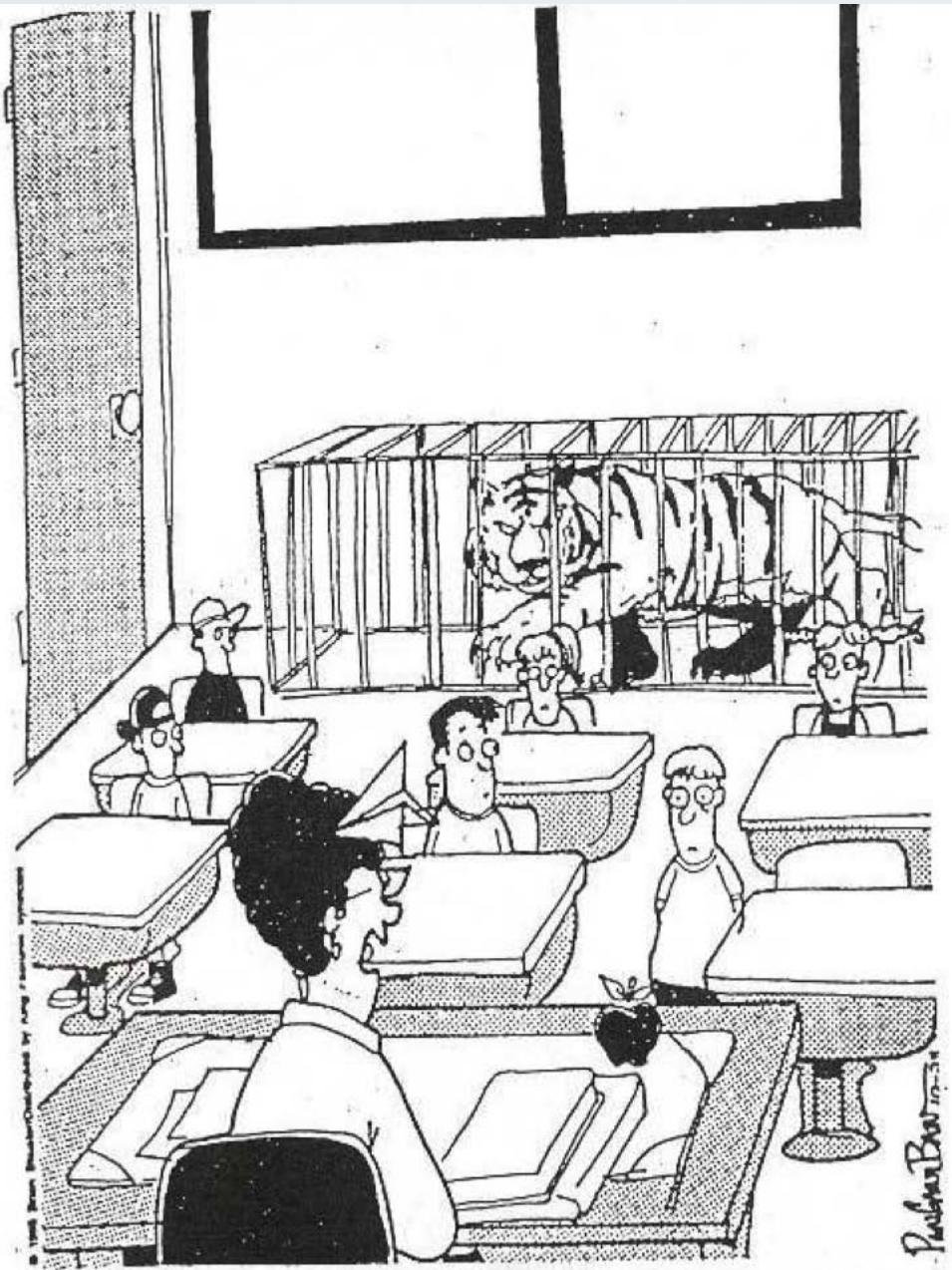
December  
2010



Starting  
2011



# EPA Consequences



"Well, Timmy, it looks like you've just earned yourself 10 minutes in the cage with Mr. Whiskers."



**HAMPTON ROADS**  
PLANNING DISTRICT COMMISSION

# Proposed Virginia Stakeholder Process

\*Two-Pronged Approach\*

1. Smaller “scoping group” produce strawman of options
2. Larger, more active, Stakeholder Group

# PDC Actions

1. Request representation on Virginia's Chesapeake Bay TMDL Stakeholder Group
2. Continue to monitor evolving process